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A FEW NOTES UPON COAL.

The more extensive use of this material in Ireland, of late years, and the large masses of it which underlie the surface of the island, would constitute a sufficient reason for some reference to the subject. It acquires additional interest, however, not merely from its connexion with commerce and manufactures, but from its bearing upon history and the domestic manners of the people. Even on philological grounds, were there no other, the word "coal" might claim to be treated with respect in our pages.

It has been said that the Romans worked coal mines in Britain; but it is probable that the ancient implements found in neglected shafts were those of much more recent people. Dr. Whitaker urges, in like manner, that the material was in use as fuel among the Saxons; but a people so rude would not have explored the bowels of the earth for that which they might have had so readily, in another form, on its surface. Wood was the natural material for firing; and it obtruded itself upon them in their numerous uncleared forests.

It is frequently said that, in England, coal has been used as fuel for at least 400 years; but the probability is, that this is true only with modifications. That is to say, its use and qualities may have been well known, but the material itself was not popular, or was employed sparingly, and exceptionally. In like manner, French brandy is known at present to the natives of England, and Hollands to those of Ireland; but neither is commonly used by the people, though it may come to be so at some future time. The Drummond light and electric light are both well known as a means of illumination; but we do not employ either of them to light our streets or our houses.

Many of the mistakes which have arisen on this subject are attributable to the ambiguity of the term employed. Thus a "coal" may mean, first, an ember or coal-of-fire; second, a piece of charcoal; or, third, the mineral coal in any of its forms. The first of these is frequently meant in the Scriptures when such expressions as the following are used: "a live *coal* in his hand," (Isa. vi. 6); "a censer full of burning *coals*," (Levit. xvi. 12); "heap *coals* of fire on his head," (Prov. xxv. 22, Rom. xii. 20); "a fire of *coals*, and fish laid thereon," (John xxi. 9). The second is certainly meant in the expression of Jeremiah (Lamen. iv. 8), "their visage is blacker than a *coal*," and is probably intended in the allusions to the smith, by Isaiah (xliv. 12, liv. 16). Some^a have supposed, partly from the different Hebrew word employed, and partly from the circumstances of the case, that in a few instances the third, or mineral coal, is intended. For example, when Job describes Leviathan, he says (xli. 19, 21), "Out of his mouth go burning lamps, and sparks of fire leap out; . . . his breath kindleth *coals*, and a flame goeth out of his mouth;" and in the Psalmist's magnificent

^a Denham in Kitto's *Biblical Cyclopædia*..

description of the Deity (xviii. 12), it is said: "At the brightness that was before him, his thick clouds passed, hailstones and coals of fire." It is supposed that the poetic similitudes become more real, by supposing the fiery breath or bright glory to inflame a pile of mineral coal; but surely the image may be as thoroughly realised with charcoal, the only substance of the name which could be popularly known at the time as subject to ignition. We may fairly assume, therefore, that the ancients, and also our mediæval ancestors, knew nothing practically of mineral coal; though individuals may have known of it, as Friar Bacon knew of gunpowder, or the Marquis of Worcester of steam.

Sir John Hill is pretty certain that Theophrastus, in his treatise "On Stones," refers to fossil coal, as he represents the workers in brass as employing it, and says, "it lights and burns like wood-coal." But it is clear that substances resembling, such as bitumen, might or might not be confounded with the mineral coal. Our own days have witnessed a most extraordinary action at law respecting the Torbane mineral; some of the most eminent scientific men of the day swearing that it was coal, and others of equal eminence declaring on oath that it was not!

If we turn back to the close of the thirteenth century, we have a minute account of the expenses of John of Brabant, who came to marry the daughter of Edward I., and also of Thomas and Henry of Lancaster, nephews to the king. The roll bears date 1292-3, and the weekly sum of charges invariably embraces such an entry as the following: "*Pro busca per dictum tempus, [vij. dies] iij. ij^d.*" It is clear from this, that wood only was burned; and, by comparing the charge for it with the general outlay, we can see what proportion it bore in the expenses of the household. Thus, in two consecutive weeks, the entire expenses amount to lxxviij. vi^d. ob. [69s. 6½d.], while the cost of fire-wood is about one-tenth of this, or vij. ob. In like manner, when we read: "*Pro litera in cameris iij. ix^d.*", we know that the rooms were strewn with rushes, hay, and green boughs, and that the carpets of Kidderminster, Brussels, Persia, Holland, and Scotland were then unknown.

Three centuries later, that is to say, 350 years from the present time, fossil coal was still unknown at an English hearth. About the close of the reign of Henry VII., or the beginning of that of Henry VIII., Polydore Vergil wrote his English history. He was a native of Italy, though long resident in England, of extensive and varied acquirements, and an ecclesiastic. Far from being behind the information of his age, he was in advance of it; yet, in the early part of his history, in treating of Scotland, he speaks as follows: "Those Scotts which inhabit the southe, beinge farre the beste parte, are well manured, and somewhate of more gentle condicion, using the English tongue, and *insteade of woodde*, whereof there they have smalle store, *they make fire of a certeyne kinde of blackstone which they digge out of the grounde.*" Now, from this passage, the following inferences seem perfectly legitimate: 1. that wood was then still very abundant in England; 2. that it was rare in the lowlands of Scotland; 3. that the English commonly used wood for fuel;

4. that the Scotch in the south generally (or at least frequently) burned fossil coal ; 5. that the modern name of it was not then in use ; 6. that even so intelligent a man as Vergil did not know any name by which to call it.

If we follow on about half-a-century farther down the stream of time, we find Edward VI. on the throne in 1551-2. The Princess Elizabeth, afterwards queen, was then a young woman with a separate establishment ; and the expenses of her household, duly audited and signed by herself, have come down to us. Under the two heads of "The Squillerie" and "The Woodyard," we have the expenses of fuel. Thus Richard Bryce, or Brice, who appears to have been a confidential servant, usually provided the coals ; but sometimes also Oliver Lowthe and Thomas Chamber. In like manner, John Lingarde and William Gibbes provided the wood.

<i>The Squillerie</i> .—Richard Brice for xxij. lodes of coales,	vj ^u . xij ^d .
To him for xxv. lodes of coales,	vij ^u . xij ^u .
Oliver Lowthe for coales,	xlvi ^u .
Thomas Chamber for the like,	lxiij ^u .
<i>The Woodyard</i> .—John Lingard for tallewoode and faggotes,	ix ^u . xvij ^s . iv ^d .
Will ^m . Gibbes, for tallewoode and faggotes	iv ^u . xvij ^u .
John Lingard for faggotes and tallewoode	vij ^u . xvij ^u .
To him for fagotes,	xlvi ^u . viij ^d .
To him for tallewoode and fagotes	cv ^s . viij ^d .

If the whole sums, of which these are only specimens, be added separately, we find that £57 : 5 : 11d. was paid for coals, and £69 : 16 : 4d. for "tallewoode and fagotes" during the same time. If the two were not equal in quantity, they were at least nearly equal in price ; and the "coales," in all those instances in which we can estimate the price, cost 5s. 8d per load. It is clear, on negative grounds, that the "coales" alluded to were not what we understand by the term ; for the latter were sold by weight and measure, not by the load ; they would have cost much more ; and, requiring to be brought from a distant part, that fact would be indicated in the name. What, then, was the material which Master Brice furnished ? We may infer that from words which lingered in our language till lately, and which still survive in provincial districts. Thus, "a heap of Fire-wood for sale, so much as would make a load of Coals when burnt," was called "coal-fire,"^b though the primitive and far more proper designation would be "a load of coals." The "tallewoodde" of Masters Lingarde and Gibbes is also explained by Bailey :—"a long kind of Shiver, riven out of the Tree, which shortened is made into Billets." Thus the whole process is before us. The fire-wood was cleft, as a lath cleaver splits timber into flakes at the present day ; and these were divided in such

^b Bailey's Universal Etymological English Dictionary, 21st edition, 1775. Wright's Dictionary of Obsolete and Provincial English, 2 vols., 8vo, 1857.

lengths as best suited household purposes. But the important fact is that, in the middle of the sixteenth century, or three hundred years ago, charcoal and wood only were burned in the chambers of an English princess, about six years before she ascended the throne.

Fashion, however, sometimes begins at the top of the ladder, and sometimes at the bottom of it; and it does not follow that coals were unknown in the country because they were unheard of in the palace. They might have been a mark of servility; while the use of wood charcoal, then becoming rare, indicated persons of quality. The following quotation resolves that point. In 1553, or very nearly at the same date, William Cholmeley, "Londyner," wrote "the Request and Suite of a True-hearted Englishman" to show the great advantage which would follow from dyeing woollen goods in England, and that it could be done equally well, instead of sending them abroad for that purpose. He says—"To the syxt objection (which is, that dying wasteth much wode) I answer thus: it wasteth much wode in very dede, but yet it wyll not destroye so much wode these hundreth yeres as the unsatiabie desyre of pasture for sheep and cattell hath caused to be stocked up by the rotis within these xxxⁱⁱ yeres last paste, contrarye to the lawes of this realme. Well, that answer satisfieth not; wherefore I say that we have plenty of *sea-cole* in many partes of this realme, so that we may in moost partis of this realme have them to serve our turne in dyinge as well as the Flemingis have, and as good cheape; for *they burne and occupye none other fuell then coles that are dygged out of the grounde, lyke our smythes doe*. Our dying therefore should not be wasteful to our wodis, but rather a preserveyng, by staying the Newcastle colys at home; for then shoulde our dyars, that do now waste much wode in dyinge deceytfull coloures, burne no wode at all, and yet should they dye as true and perfect coloures, and to them more benefytt."

It is clear from this that wood was then beginning to be scarce, and perhaps costly; that coals were used for manufacturing purposes; that they were exported from Newcastle, and purchased by the Flemings; that for heating iron, they had long been known in England; but that they were not yet in use, or even thought of, for domestic purposes.

Nearly half-a-century later, viz., about 1599, Shakspeare wrote some of his more matured plays, including the two parts of King Henry IV. In the second act of the latter part, Dame Quickly, in reproving Falstaff, speaks as follows:—"Thou didst swear to me upon a parcel-gilt goblet, sitting in my Dolphin chamber, at the round table, by a *sea-cole* fire; upon Wednesday in Whitsun week, . . . to marry me and make me my lady, thy wife." Here the categories of time, place, position, circumstance, &c., are given with great minuteness; but the important points are, that in fifty years more, wood had become still more scarce; that coals had passed the stage of manufacturing use, and had been introduced into private houses; but that they were not used exclusively in an inn chamber or on a day in spring, for the kind of fire is specified. The sort less known has a distinctive prefix, "*sea-coal*," indicating that it came by sea to London; just, as in modern times, we say "*char-coal*," the more general term indicating fossil or mineral coal. In some of the

earlier plays of Shakspeare the word is used in a different sense; as when Aaron says of the infant, that it is "coal-black" (*Titus Andronicus*, A. iv., S. 2); or when, in the first line of *Romeo and Juliet*, Sampson says— "O' my word, we'll not carry coals."

This is a provincial expression still in use, meaning "we'll not submit to degradation;" like "we'll not be hewers of wood or drawers of water."

A quarter of a century further on, viz., in March, 1627-8, there was discovered a Jesuits' college at Clerkenwell; and as the house did not appear to be furnished in any respect differently from an ordinary gentleman's residence, it is interesting to see the provision of fuel which was laid up:

"Item, half a thousand of billets, and two chaldron of *sea-coales*, taken by Mr. Long, for his own use, and by him prised [valued] at xxx viij*."

The London chaldron consisted of 36 heaped bushels, and the Newcastle of 72. We have some guide to the comparative value of these articles in another item, appraised at the same sum:

"Item, a pewter cesterne, one flagon pott, three pewter candlesticks, one small dish and a sawcer, foure stone jugs, one little brasse bell, seaven knives, eleven forks, seaven pewter salts, six earthen salts, and 21 greene glasses, xxx viij*."

It was about this time that the proverb originated, "to carry coals to Newcastle;" but other proverbial expressions, having reference to coals and fire, had originated long previously. Jamieson mentions several in the Supplement to his great Dictionary, but in general, they are not known in Ireland. The expression, however, "to blow at a dead coal," will be recognized as indicating fruitless labour. Thus a person wishing to light a candle at a turf ember, and trying to excite it to a blaze, finds that it has become extinct. Brockett* says that the expression to "call one over the coals," is derived from the ancient ordeals or appeals to God by fire; and this is not at all improbable. In the *Promptorium Parvulorum*, compiled about the middle of the 15th century, the living coal and dead coal are distinguished:—

COLE of fyre, brynnynge: *Pruna*.

COLE, qwenchyd: *Carbo*.

The Latin words are not very correctly assigned, for *pruna* indicated a red coal,^a but not blazing; and *carbo* one either fiery red^c or not so.

About 1680, Charles II. granted a patent to his natural son, the Duke of Richmond, entitling him to 1s. per Newcastle chaldron, on all coals shipped at Newcastle for consumption in England. In the earlier years, this could not have amounted to a large sum, but it was a revenue which grew rapidly, both from increase of population and enlarged use. In 1835, the coals consumed in London averaged nearly a ton per head, as compared with the population; but a century and a-half before,

* North County Glossary, 8vo.

^a Nunquam ad flammam ungi oportet, interdum ad prunam. *Cels*.

^c Cum carbo vehementer perlucet. *Pliny*.

when London was not equal to one of the largest provincial capitals, the consumption of 'sea-coal' probably did not average half a ton per head. At present, the home consumption of England and Wales is probably about thirty millions of tons, or a ton and a-half per head, as compared with the gross population.

In Ireland, coals have been later in coming into use, for various reasons. Many of our most flourishing counties of to-day were nearly depopulated at a time when England had possessed a settled government for centuries; so that the wheels of social progress have moved forward with more tardy revolutions. But even since the Plantation of Ulster, the forests had to be felled, after which the people possessed an article of fuel which is the rule in this country, but exceptional in England. The physical formation of the Island,—with mountain tufts around its sea margin, and a hollow centre,—has led, with other collateral causes, to the formation of turf-bogs; and on a small scale, every hollow possessed a portion of it. Large areas of this black earth have passed through the intermediate condition of moor-land, and become at length fertile fields; a remarkable example of which may be seen in the parts of the parishes of Blaris, Hillsborough, and Moira, which lie towards the banks of the Lagan. The whole district is still called "The Bogs," occupying the site of the half-fabulous Loch Ryle, and "ye pace," or the Pass of Kilwarlin.

In the close of last century, some of the turf bogs began to be exhausted, and the attempts to procure fuel led to the riots on the Maze Course, in 1773 and 1775, between the men of Kilwarlin and Broom-hedge, resulting finally in the murder of a man called Gray. During the rebellion of 1798, when the insurgents were allocating prospectively the property of the neighbouring gentry, one small farmer, whom I knew in boyhood, objected to take for his share an estate in the parish of Dromore, because there was "no Bog in it." But even in the first quarter of the present century, coals were little known in the North of Ireland, except in the better class of town houses, and also among smiths and other artisans. A parliamentary paper gives the shipments of coals to Ireland in 1829 as 840,246 tons; and adds that the rate of increase had been for some years steady, at 100,000 tons per annum. If it had been so for only six years previously, the coals used in Ireland in 1823 amounted to not more than a quarter of a million of tons, when the population exceeded seven millions; that is to say, a ton to about every thirty people. This fact, however, is partly explained by the small prevalence of manufactures.

Many of the old people objected to the smell of coals, and could not believe that turf fires had any smell, though they admitted it in the case of wood fires, or bramble, especially whins or furze. Not only has the prejudice disappeared, but the preference is rapidly turning the other way. It is now found that the most smoky town in the British dominions, Birmingham, is the freest from epidemics; that cholera has never obtained a footing there; and that the carbon appears to act as a merciful and permanent disinfectant.

In the progress of a large town, a few years constitute a historic epoch. Many of your

Belfast readers will recollect the Falstaff form of that prince of good fellows, Billy Massey, and also the numerous touters and hangers-on called porters, who carried the bags of coals from the small vessels to the carts on shore. With a black empty sack over the shoulder, and an equally grim visage, each seemed, when looking out for customers, like a visitant from the infernal regions. These men levied a tax of 2s. per ton on the merchant, that is to say, on the consumer : and so strong was their combination, that they enforced the payment of it, whether they brought the customer to him or not, or even if they had rendered no assistance. This impost was known as "the old man." But peace to their ashes, they have passed from the scene ; and while Ireland reserves in her bosom the mineral treasures for future ages, and bides her time, it is pleasant to glance at the small beginnings of a great and growing branch of industry, as exemplified in each of the three kingdoms—

The English is not the only language in which the same word has been used, or is still employed, to designate both charcoal and pit-coal. In modern French, we find *charbon-de-bois*, and *charbon-de-terre* ; but in the ancient Langue d'Oc, and in the dialect which prevailed throughout the South of France, including Gascony, the same word, *carbou*, served for both. The following extract is given from the interesting and rare *Dictionnaire Languedocien François*, 2 vols. 8vo, Nismes, 1785:—

CARBOU, Du charbon, de la braise. Nous confondons ces deux derniers termes, parce qu' ils ont un nom commun en languedocien. Les charbonniers font le charbon dans les bois, et nous le vendent au poids.

La braise est du charbon éteint ou allumé de nos cheminees, ou des boulangers, et toujours des débris du bois qu'on y brûle.

CARBOU, Du charbon de terre, du charbon minéral, de la houille. On ne la trouve communément que dans les terrains et parmi les rochers graveleux ; plus il est profond et humide, meilleur il est pour les forges. Il est ordinairement par veines ou filons, plus ou moins épais, parallèles, et séparés l'un de l'autre par un lame de rocher.

CARBOU, charcoal, live coal. We confound these two latter terms, because they have one name in common in the dialect of Languedoc. The charcoal-burners make the CHARBON in the woods, and sell it to us by weight.

The live coal (la braise) is the extinguished or burning coal of our domestic fires, or of the bakeries, and it is only the waste portion of the wood that is burnt there.

CARBOU; earth coal, mineral coal, pit-coal. In general, this is found only in the ground, and among gravelly rocks: the more deep and moist it is, the better for forges. It is usually in veins or beds more or less thick, which are parallel, and separated from each other by a partition of rock.

A. HUME.